

The observations of M. Trousseau were made on infants somewhat more advanced in life, and from them it would seem that the pulse becomes less variable as the child gets older. It is unnecessary to mention that no children were examined except those who presented every appearance of perfect health. The author divides his observations into two categories, one confined to the last six months of 1840, the other to the first six months of 1841.

Last semester of 1840.—Fifty-four infants, (27 male, 27 female,) aged from fifteen days to twenty-one months, were examined; they were divided into four classes; viz., 1st, from fifteen to thirty days old; 2d, from one to three months; 3d, from three to twelve months; 4th, from twelve to twenty-one months. In the first class, (6 male, 5 female,) the maximum pulse was 152; minimum, 120; difference, 32; mean, 135. Second class, (5m. 5f.) maximum, 156; minimum, 108; difference, 48; mean, 132. Third class, (12 m. 16 f.,) maximum, 144; minimum, 112; difference, 44; mean, 120. Fourth class, (4 m. 1 f.,) maximum, 140; minimum, 92; difference, 48; mean, 125.

First semester of 1841.—One hundred and six infants were examined with great care and attention during this period; M. Trousseau furnishes all the details, but we can find room for his conclusions only.

Influence of Age.—Age seems to exercise but little influence on the state of the pulse in infants; during the first month the mean is 137; second month, 132; from two to six months, 128; six to twelve, 120; twelve to twenty-one months, 118. The maximum frequency occurs during the first month, the minimum towards the period of weaning. The difference of frequency, however, is not much, being only 19 in the males, and 13 in the females, and from the third month forwards little or no variation takes place.

Influence of Sex.—During the first two months there is little or no difference of frequency between male and female infants; but after the third month, it assumes that character of greater frequency in the female which distinguishes it during the rest of life.

The influence of the states of waking and sleeping is infinitely more marked; in infants of fifteen days to six months the pulse during sleep was 121; during waking, 140; from six to twenty-one months, while asleep, the infant had 112 pulsations; while awake, 128; the difference is much greater when the child cries, is afraid, or struggles; the pulse will then mount from 112 to 160 or 180.

From the above observations, it follows that, in infants, during the first two weeks, the pulse may vary from 78 to 150; during the second fortnight, from 120 to 164; one to two months, from 96 to 132; two to six months, 100 to 162; six to twelve months, 100 to 160; twelve to twenty-one months, 96 to 140. These remarks show of how little value is the pulse as a sign of disease in infants.—*Ibid.*, from *Journ. des Connais. Med. Chir.*, July, 1841.

3. Imperforate Anus—Absence of Rectum.—M. DUBREUILH relates, in the *Journ. de la Société de Médec. de Bourdeaux*, a case of this description. The subject of it was a child born at the $7\frac{1}{2}$ month of gestation. It lived ten days. On examination after death the rectum was found deficient; while the colon, running exactly along the linea alba, terminated in the summit of the bladder, which was about the size of a hen-egg. A probe passed along the urethra entered the colon through the bladder; the opening between the bladder and colon was 12 millimetres in diameter. The bladder was full of yellow fecal matter; its mucous membrane was of a reddish-brown colour, and its parietes two millimetres in thickness. The ureters could not be discovered; the urethra was natural; the parietes of the colon, in the vicinity of, and for some distance above the bladder, were thin and transparent, but of natural thickness in the rest of their extent.

4. On Electric currents in the Nerves.—Professor BISCHOFF and JOLLY relate, in *Müller's Archives*, (H. I. 1841,) a brief series of experiments, the results of which corroborate entirely the conclusions drawn by most other physiologists from the facts already known. They establish, first, that even the most delicate galvanometers can detect no current of electricity in the nerves; although

they are such bad conductors of electricity, that its passage through them is not discernible even when its force is such as would act on very coarse galvanometers. These two facts together are conclusive against the existence of the supposed natural currents, since if they existed in such bad conductors, it is impossible but that the electrical tension would be sufficient to affect the galvanometer. But on the other hand, it is clearly proved that the nerves themselves are the most delicate of galvanometers, being so irritable to the electrical stimulus that muscular contractions are excited by a current too weak to be detected by the ordinary galvanometer-needle. Other experiments are alluded to which seem to prove that there is no free electricity in either the brain or spinal cord.—*British and Foreign Med. Rev.* July, 1841.

5. *On the Functions of the Anterior and Posterior columns of the Spinal Cord.* By Dr. KUERSCHNER.—The experiments here related, to establish that the anterior and posterior columns are respectively and exclusively motor and sensitive, are simple, and founded on the well-known phenomena of reflex action.

The facts that individual muscles can be voluntarily moved, and that isolated sensitive impressions can be perceived, prove that the nervous principle is conducted along the spinal cord according to the same laws as it is along the nerves themselves. Reflex motions, therefore, cannot take place when the supposed sensitive columns are stimulated at the top of a divided cord, for the sensitive fibres cannot conduct centrifugally, nor can any motions take place in consequence of stimulating those columns unless they contain motor filaments. But in several experiments, chiefly performed on decapitated frogs, no motions whatever were excited by stimulating the upper part of the posterior columns, though by the slightest touch of the anterior severe convulsions were produced. The same result was obtained in whatever way the experiment was modified, so that there can be little doubt that there are no fibres in the posterior columns which are capable of conveying impressions (directly) to muscles.

The converse, namely, that there are no fibres in the anterior columns, capable of conveying sensitive impressions, was proved in a similar manner. Thus, reflex motions occur only with the assistance of the centripetal nerves; and therefore when the posterior roots of the nerves of one of the legs of a frog are divided, irritation of the skin of that leg should cease to excite motion. And this in reality occurs; whenever the posterior columns, or roots of the nerves of a limb are destroyed, all reflex motion on irritating its skin is put an end to, although irritation of the anterior columns or roots still produces active muscular contractions.—*Ibid.*

6. *On a Peculiar Disposition of the Arteries of the Uterus.* By M. BRICQUET.—The arteries of the uterus during pregnancy, besides their increased diameter, also acquire an increased elongation, which renders them tortuous, even whilst the uterus is still filled with the products of conception. When the uterus, however, has expelled its contents, whether at or before the full period, the arterial sinuosities, in consequence of the contraction of the walls of the uterus, increase so as to touch each other by their convex surfaces. The plane of the circles to which these belong is then parallel to that of the coats of the uterus; but, as the uterus goes on diminishing in size, the sinuosities not being able to increase any further in that direction, bulge out in another, perpendicular to the plane of the coats of the uterus. In this state, the arteries, instead of forming simple bendings or sinuosities, present the appearance of spiral or helicine vessels, which retain this form during the whole time the uterus is returning to its former contracted state. M. Bricquet found that this helicine or spiral disposition of the uterine arteries, once produced, is retained ever after, and is not lost during life. He thinks this fact will prove a valuable addition to our stock of knowledge, as to the medical jurisprudence of pregnancy, as he asserts that this appearance is never produced but by pregnancy, and is never met with in the unimpregnated womb.—*Edin. Med. and Surg. Journ.*, from *Bull. de l' Acad. R. de Med.*, March 16, 1841.